

WHAT IS CLAIMED IS:

1. A method used in attaching die to a substrate, comprising:  
providing a polyimide substrate having a plurality of die attach regions;  
5 positioning a dispensing tool having a rectangular aperture adjacent a respective one of the die attach regions, the rectangular aperture having a length greater than a width;  
positioning the rectangular aperture proximate the respective die attach region;  
10 dispensing an epoxy through the rectangular aperture and onto the respective die attach region;  
translating the dispensing tool in a direction perpendicular to a length of the aperture while dispensing the adhesive to form an epoxy region on the respective die attach region; and  
15 attaching a die to the epoxy region, a length of the die approximately equal to the length of the rectangular aperture.
2. The method of Claim 1, wherein the length of the rectangular aperture is between approximately three and nine, and a width of the aperture is between  
20 approximately 0.09 millimeters and 0.11 millimeters.
3. The method of Claim 1, wherein the width of the aperture is approximately 0.10 millimeters.
- 25 4. The method of Claim 1, wherein positioning the rectangular aperture proximate the respective die attach region comprises positioning the rectangular aperture between 0.10 and 0.11 millimeters from the surface of the respective die attach region.

5. A system used in attaching die to a substrate, comprising:  
a substrate having a plurality of die attach regions;  
a dispensing tool comprising an aperture having a length greater than a  
width;

5 an adhesive delivery system operable to deliver an adhesive to the  
dispensing tool, the dispensing tool operable to dispense the adhesive through  
the aperture and onto a respective one of the plurality of die attach regions;  
and

10 a translation device operable to translate the dispensing tool in a  
direction perpendicular to the length of the aperture while dispensing the  
adhesive, whereby an adhesive region is formed on the respective die attach  
region.

15 6. The system of Claim 5, wherein the aperture is rectangular.

7. The system of Claim 6, wherein the length of the aperture is between  
approximately three and nine, and a width of the aperture is between approximately  
0.09 millimeters and 0.11 millimeters.

20 8. The system of Claim 6, further comprising a die attached to the  
adhesive region, wherein the length of the aperture is approximately equal to a length  
of the die.

25 9. The system of Claim 5, wherein the dispensing tool is between 0.10  
and 0.11 millimeters from the surface of the respective die attach region during the  
dispensing of the adhesive.

30 10. The system of Claim 5, wherein the substrate is formed from a  
polyimide.

11. The system of Claim 5, wherein the adhesive is an epoxy.

12. The system of Claim 5, wherein dispensing tool is formed from a tool steel.

13. A method used in attaching die to a substrate, comprising:  
providing a substrate having a plurality of die attach regions;  
positioning a dispensing tool having an aperture adjacent a respective  
one of the die attach regions, the aperture having a length greater than a width;  
5 positioning the aperture proximate the respective die attach region;  
dispensing an adhesive through the aperture and onto the respective die  
attach region; and

translating the dispensing tool in a direction perpendicular to the length  
of the aperture while dispensing the adhesive to form an adhesive region on  
10 the respective die attach region.

14. The method of Claim 13, wherein the aperture is rectangular.

15. The method of Claim 14, wherein the length of the aperture is between  
15 approximately three and nine, and a width of the aperture is between approximately  
0.09 millimeters and 0.11 millimeters.

16. The method of Claim 14, further comprising attaching a die to the  
adhesive region, and wherein the length of the aperture is approximately equal to a  
20 length of the die.

17. The method of Claim 13, wherein positioning the aperture proximate  
the respective die attach region comprises positioning the aperture approximately  
between 0.10 and 0.11 millimeters from the surface of the respective die attach  
25 region.

18. The method of Claim 13, wherein the substrate is formed from a  
polyimide.

19. The method of Claim 13, wherein the adhesive is an epoxy.

20. The method of Claim 13, wherein dispensing tool is formed from a tool steel.